

Date: Thu, 11 Mar 93 12:42:23 PST
From: Info-Hams Mailing List and Newsgroup <info-hams@ucsd.edu>
Errors-To: Info-Hams-Errors@UCSD.Edu
Reply-To: Info-Hams@UCSD.Edu
Precedence: Bulk
Subject: Info-Hams Digest V93 #306
To: Info-Hams

Info-Hams Digest Thu, 11 Mar 93 Volume 93 : Issue 306

Today's Topics:

DX forwarding from BBS (a question)
Ham Power Limit proposed
Ham Radio Outlet incident
Help!, mobile noise
Help building portable GPS antenna
How do I ground the antenna?
Lightning and inside wiring
Quantics->DSP kit
Resistor Drift
TS440/SAT Tuner Problem
Uniden reply comments on FCC scanner ban (docket 93-01)

Send Replies or notes for publication to: <Info-Hams@UCSD.Edu>
Send subscription requests to: <Info-Hams-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Info-Hams Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/info-hams".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 11 Mar 93 19:44:22 GMT
From: news-mail-gateway@ucsd.edu
Subject: DX forwarding from BBS (a question)
To: info-hams@ucsd.edu

I have been asked (by a newbe) BBS operator how he can forward messages
overseas, such as to the Philipines. Of course he is also interested in the
reverse path.

Maybe this is the wrong forum, but please reply anyhow. I know about the
store-and-forward satellites, but think that is probably beyond this fellow.
He needs an appliance-operator solution. Do you have one.

Tnx, 73, Bob W3OTC <w3otc@amsat.org>

Date: Thu, 11 Mar 1993 19:24:39 GMT
From: news.cerf.net!proton!psi.llumc.edu!britton@network.UCSD.EDU
Subject: Ham Power Limit proposed
To: info-hams@ucsd.edu

The February, 1993 issue of RF Design magazine published a letter-to-the-editor which should be of concern to U.S. hams. The letter follows:

Editor:

While I support your idea ("An EMC Wish List", RF Design, August, 1992) that consumer equipment should be more resistant to EMI than most of it presently is, my jaw dropped when I read that the FCC had measured a 9 V/meter field induced in a hapless neighbor's home by a ham running a 1 kW HF transmitter. This is a HUGE, absurd amount of RF for a piece of consumer equipment to reject!

EMI suppression is not free. If a \$300 (retail) VCR can have no more than about \$40 in actual component cost, the cost of adding sufficient EMI suppression to reject a 9 V/m yield can significantly affect the selling price of such equipment. I would ask you why tens of millions of consumers should be so taxed to permit a few amateurs to indulge their hobby. In the 1930's, it did not seem unreasonable to let people fire up 1 kW rigs in residential neighborhoods. In the 90's, it seems absurd to permit this. Reducing power to 10 W would reduce the electric field 20 dB (to 0.9 V/m). While this is still a lot of RF, the power level now becomes comparable to other services, like cellular phones and the like. It is time for the FCC to act to reduce the permissible RF fields that amateurs can blast into their neighbor's homes.

Robert Orban
Belmont, CA

This should be a sobering thought. While the argument is not totally without merit, the picture being painted is one of the ham as villain and the "hapless neighbor" as victim. Responsible individuals with well-reasoned opposing opinions (no flames, please) are encouraged to write:

Editor, RF Design, 6300 Syracuse Way, Suite 650, Englewood,
Colorado, 80111

Also, clip a copy of this and send it to your ARRL representative. Good

luck to all, de Barrie k0wwg Rvierside, Calfiornia

Date: Thu, 11 Mar 1993 19:03:27 GMT
From: mvb.saic.com!unogate!news.service.uci.edu!ttinews!calvin.tti.com!
cole@network.UCSD.EDU
Subject: Ham Radio Outlet incident
To: info-hams@ucsd.edu

In article <jzjt6=f@dixie.com> jgd@dixie.com (John De Armond) writes:
>From: jgd@dixie.com (John De Armond)
>Subject: Re: Ham Radio Outlet incident
>Date: Thu, 11 Mar 93 07:55:02 GMT
>William=E.=Newkirk%Pubs%GenAv.Mlb@ns14.cca.CR.rockwell.COM writes:
>
>> "Yes I am" was my reply. "Well, look, the people who work for me
>> here on the weekends are volunteers." He appeared to be a bit
>
>>Volunteers? Why do i find this hard to believe? I would think the regular
>>paid employees would revolt over this. I know I'd be not happy to know that
>>my services as a salesman, something I would get compensated to do, is done
>>for free on the weekends. I'd want those commissions. Letting the volunteers
>>sell on the weekends would just devalue my worth to the owner - since he can
>>get my job done for free.
>
>
>Bill, I know it is in the Usenet tradition, particularly in the ham
>radio groups, to dispute what someone says based only on gut instinct
>and supposition. I also know it is tradition to write a several thousand
>character epistle. But just this once, take what the guy said as truth.
>
>I'll give you a tip as to why: The HRO store here in Atlanta also uses
>non-paid volunteers. What a concept? Letting the kids play in the
>toy store.
>
>John
>--
>John De Armond, WD40QC | Interested in high performance mobility?
>Performance Engineering Magazine(TM) | Interested in high tech and computers?
>Marietta, Ga | Send ur snail-mail address to
>jgd@dixie.com | perform@dixie.com for a free sample mag
>Need Usenet public Access in Atlanta? Write Me for info on Dixie.com.

What a concept? WHAT A RIPOFF!

If this is true (note continued skepticism based on gut instince and
suppositions), my opinion of HRO just went in the toilet. Let me

give a few reasons

1. It isn't fair to a competitor who tries to pay his employees a decent living wage.
2. It isn't fair to a customer who has to deal with someone who has little motivation to conduct himself/herself responsibly.
3. It isn't particularly fair to the volunteers. What happens if they get injured while "volunteering?"
4. It isn't fair to HRO's paid employees who have to work with people who aren't particularly accountable to management, and may have to spend extra time and effort training volunteers and fixing their mistakes. This is in addition to the points Bill Newkirk made.
5. It isn't fair to people who could use a job.

Yeah, I know, life isn't fair. But nobody forces me to buy from HRO. I've been treated well by HRO in the past. Maybe there are mitigating circumstances that aren't obvious. But if this "volunteer" crap is true, I'll buy from someone else, thank you.

Randy Cole
KN6W

Date: Thu, 11 Mar 1993 17:30:23 GMT
From: amdcad!amdc12!brian@decwrl.dec.com
Subject: Help!, mobile noise
To: info-hams@ucsd.edu

(Ron Natalie) writes:
> What kinds of food go well with alternator wine?
>
> -Ron

Pizzzzzzza, Rice Crispies, Nestle's Crunch, and of course anything spiced with orrrrrrrregano.

brian

Date: 11 Mar 93 17:43:58 GMT
From: pipex!bnr.co.uk!uknet!acorn!agodwin@uunet.uu.net
Subject: Help building portable GPS antenna

To: info-hams@ucsd.edu

In article <1993Mar5.135239.1012@synapse.bms.com> gopstein@helix.bms.com (Rich Gopstein) writes:

>
>I am building a handheld GPS receiver based on the Magellan OEM GPS
>board. I've got all of the parts that I need, except for a small
>antenna -- the one that came with the board is meant for vehicle
>mounting, and is much too big to use on a handheld unit.

>
>Can anyone offer suggestions on building a compact, 50 ohm antenna for
>1575 MHz? Thanks!

>

The Electronics and Wireless World articles that someone mentioned show a 'patch' antenna. I don't know if that's suitable for handheld use, though it is rather low profile. Can anyone tell me where I could find out more about the design and performance of these devices ?

-adrian

--
Adrian Godwin : agodwin@acorn.co.uk : adrian@fangorn.demon.co.uk : g7hwn@gb7khw
ObDisclaimer : I believe this rubbish .. don't imagine that anyone else does.

Date: Thu, 11 Mar 1993 19:39:41 GMT
From: usc!zaphod.mps.ohio-state.edu!malgudi.oar.net!caen!nic.umass.edu!
news.mtholyoke.edu!news.unomaha.edu!cwis.unomaha.edu!rerickso@network.UCSD.EDU
Subject: How do I ground the antenna?
To: info-hams@ucsd.edu

The last I knew, the National Electrical Code, in this example would require a minimum of #6 copper wire. Using a RG-8 coax shield for ground would work, but it would increase the safety margin and possibly prevent coax self-destruction by a near or direct hit of lighting in having the two parallel ground paths.

As you know, paralleling resistances decreases the resistance.

For the sake of your rig I would put the coax into a three turn coil for a lightning choke which would not make it an adequate grounding source for your antenna. Believe me, as a former AM broadcast engineer, lighting can sneak up on

you and you do not want your coax as the only ground return.

73,
Ron
AKON

Date: Thu, 11 Mar 1993 19:24:58 GMT
From: usc!howland.reston.ans.net!sol.ctr.columbia.edu!jabba.ess.harris.com!
mlb.semi.harris.com!SU19F!jhobson@network.UCSD.EDU
Subject: Lightning and inside wiring
To: info-hams@ucsd.edu

In article <1993Mar8.225111.18129@nynexst.com> atul@nynexst.com writes:
>I mounted a receive only long wire antenna from my second floor
>window to a nearby tree. I was planning to sink an 8 ft ground
>rod right below the window. I tried pushing the rod into the
>ground in the vicinity of the window. Unfortunately, I cannot
>make the rod go more than 2 ft deep. I guess there must be rocks
>in the earth. My only other recourse is to run the ground wire
>down to the basement, through the metal frame of the basement
>>window, to the cold water pipe (just before the water meter
>and valve). Incidentally, the electrical ground for the house
>wiring is tapped from the same location.
>Thanks.
>--Atul

I am using copper water pipe for ground rods. If my memory serves me a 10' long 1/2" water pipe was cheaper than an 8' copper clad steel ground rod. I sunk the pipes by standing on a step ladder, holding a water hose with water running on the top end, and pushing down. For the most part, the pipes went in like a cool knife through butter. This is Florida and sandy soil mind you. The problem I had was that I stepped off the next to the bottom rung of the ladder instead of the bottom and sprained my ankle :(

The next step was (painful, but besides that) to connect the ground wire to the pipe using the straps that an electrician uses to connect the electrical ground to the water pipes. After making pretty good mechanical connections, I soldered the whole mess (using a propane torch).

I put in 3 pipes outside the entrance to my shack in a triangular shape about 8" on a side. My ground wires come from a ground bar (I got it from the metal recycling place and think its an electrode from an electrolysis operation - 3/8" x 2" x 3'). I'm planning to put an entrance panel with bulkhead mounted coax connectors. I got

some copper flashing from the recycle place and plan to fashion a panel from that. I can't decide whether to use the copper pipe to make the connection from the panel down to the ground rods. I could just "plumb" it thus using the pipe for mechanical support as well as the electrical path to ground. I also have (from, guess where: the recycle place) a bunch of ~#6 wire. It's got about 20 or more strands - my understanding is that's good for RF.

Lightening struck my antenna (Cushcraft R5) and exploded the plastic box with matching transformers. I had relatively little damage in the shack so I guess I've done something right.

Harv Hobson
WB4NPL
jhobson@su19f.ess.harris.com

Date: Thu, 11 Mar 1993 19:36:16 GMT
From: usc!zaphod.mps.ohio-state.edu!malgudi.oar.net!news.ysu.edu!yfn.ysu.edu!
ag821@network.UCSD.EDU
Subject: Quantics->DSP kit
To: info-hams@ucsd.edu

With all the complaining about problems with varioius companies, just thought I would throw in some positive experiences.

I ordered the Quantics DSP ki after it came out in QST. I received a letter back saying that they had an overwhelming response and were back ordered. Enclosed was a self-addressed card saying very nicely they would gladly refund my money if I didn't wish to wait.

There was another delay, but this time Quantics had updated the kit to have 10 functions that are front panel selectable and for a little more I could update the order (I really wanted the extra functions and was almost jumping for joy that the original didn't ship. although the units are easliy upgradeable). Once again I was given an option of getting my money back (with a prepaid card).

Someone mentioned that Dave,W9GR was reachable on the Internet. I dropped him a E-Mail message. He returned with a reply very promptly and told me I was #20 and it would ship Wed. (yesterday).. it was special delivered and there when promised

I understand delay, and really appreciate the way in which everything was handled. The kit looks real good (and my undersatnding from people already using them, is that it works great.. great deal for about \$125).

73s de Cookeville,TN

Jeff, AC4HF

--

Jeff M. Gold, AC4HF
Manager, Academic Computing Support
Tennessee Technological University

Date: Thu, 11 Mar 1993 20:01:07 GMT

From: swrinde!zaphod.mps.ohio-state.edu!moe.ksu.ksu.edu!crcnis1.unl.edu!
news.unomaha.edu!cwis.unomaha.edu!rerickso@network.UCSD.EDU
Subject: Resistor Drift
To: info-hams@ucsd.edu

If you can, metal oxide resistors are believed to be the most stable of resistors available providing one does not push the wattage to the limit so the resistor burns up or, at the very least, heats up too much.

73,
Ron
AKON

Date: Thu, 11 Mar 1993 19:22:56 GMT

From: usc!sdd.hp.com!hp-cv!hp-pcd!hpcvra!gregm@network.UCSD.EDU
Subject: TS440/SAT Tuner Problem
To: info-hams@ucsd.edu

Now I have a question...

I have an interesting problem with a TS-440SAT antenna tuner. Works fine on the higher freqs -- does all the nice searching and dropping right in on the best match. That is, it works on 29MHz, 28MHz 24MHz but at 21 it never finds a match even with a 500hm dummy load -- at least I still see some dipping but only to about 2:1. It gets even worse the lower I go to on 80 where the meter just sits on infinity SWR and motors just keep searching. I can see power move up and down a bit as it approaches some sort of match. The rig works fine except thru the ant tuner -- all SWR readings on the rig match what I read on an external meter when

looking at real loads.

I have gone through service manual and what little theory of ops are in the manuals -- Kenwood says to reset the processor -- that was a big help (Ha). I also verified all the settings on the tuner are adjusted correctly.

I assume at this point that the taps on the coil never get adjusted on one band, i.e. they are switched only when changing bands and the CPU does not play with those when trying to find a match -- appears to be the case. Relay taps do change when changing bands (I have not figured a way to actually look at the switches without pulling them off the board -- the relays do get driven -- just don't know if the contacts are good since they are in parallel with ground. Yet I strongly suspect the coil taps since this appears to be a frequency related problem within matching circuit and we are only talking about three adjustable components. No short on caps and no opens on the main coil.

Has anyone seen something similar to this? Any thoughts?

Greg May
KB4OX
gregm@cv.hp.com

Date: Thu, 11 Mar 93 19:15:40 GMT
From: walter!porthos!dancer!whs70@uunet.uu.net
Subject: Uniden reply comments on FCC scanner ban (docket 93-01)
To: info-hams@ucsd.edu

The following is the Uniden reply comments on the FCC scanner/cellular coverage NPRM. Note especially the mention of SWB Mobile and another entities request for similar frequency "blockage" for other services. The floodgates have been opened!!!

Note also the section dealing with "converters." The converter ban will (IMHO) have a direct impact on 900mhz transverter availability for the ham bands as (I believe) it is all but impossible to design a 900mhz transverter for hams that isn't easily modified for reception of 800mhz cell phone. In fact, I'd bet that any transverter will be broad enough in frequency coverage at 900mhz that the possibility of using it unaltered to "convert" 800 mhz to a receivable scanner input frequency is probable.

PLEASE, while I posted this to both the policy and misc. newsgroups,

reply ONLY to the rec.radio.amateur.policy to confine any policy discussion to that appropriate newsgroup.

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the matter of)
)
Amendment of Parts 2 and 15 to) ET Docket No. 93-1
Prohibit Marketing of Radio Scanners)
Capable of Intercepting Cellular)
Telephone Conversations)

REPLY COMMENTS OF
UNIDEN AMERICA CORPORATION

INTRODUCTION

1. Uniden America Corporation (hereinafter "Uniden") respectfully submits its reply comments to the above captioned NOTICE OF PROPOSED RULE MAKING ("NPRM").

DISCUSSION

2. Uniden has read all comments contained in the Commission's Record Image Processing System as of February 23, 1993. Although many commentors addressed whether or not the proposed NPRM met the objectives of "increas[ing] the privacy protection of cellular telephone users...", generally most commentors supported the proposals of the Commission. Some of the supporting commentors had some parochial exceptions or inclusions, which we will address.

3. Southwestern Bell Mobile Systems ("SBMS") in its comments proposed that "the Commission should act now to include in these amended rules proscription on scanners that tune frequencies allocated to the Personal Communication Services that will be effective as soon as that allocation is made." In a similar proposal, Fleet Call, Inc. ("Fleet Call") stated "the Commission should expand the applicability of its proposals to prohibit scanners capable of tuning the frequencies allocated to the SMR service." In the Telephone Disclosure and Dispute Resolution Act ("Act") Pub. L 102-556, the scope is limited to the domestic cellular radio telecommunications service. Uniden strongly objects to any

attempt to broaden the restrictions beyond those detailed in the Act, itself. To do so could set a dangerous precedent by restricting the reception of frequency ranges which have been historically and widely accepted as our fundamental right to monitor. In our comments, we did not address the merits of the Act with regard to the congressional mandate to the Commission. However, we believe that both SBMS and Fleet Call are proposing that the Commission establish restrictions well beyond the mandate of the Act. Uniden urges the Commission not to act favorably on these requests.

4. The Cellular Telecommunications Industry Association ("CTIA") has proposed a definition of "readily altered" which is overly restrictive, burdensome, and not required to accomplish the purposes of the Act. There is no way to make an electronic device totally tamperproof with regards to restricting the interception of cellular telephone frequencies, or any other frequency. A case in point is the cellular telephone itself. If a technically competent individual wants to modify a device to listen to other telephone calls, what unit would be better suited for this purpose? Some of the early cellular telephones were even able to monitor communications when programmed by the actual user. Therefore, in this area we continue to support the NPRM as written in the belief that it strikes a balance and reasonably accomplishes the requirements of the Act, without overly restricting manufacturers in the production of scanners for legitimate uses.

5. The Harris Corporation ("Harris") wishes an exemption to the proposed restrictions because they manufacture a device that purposefully intercepts cellular communications which is "expressly designed for law enforcement and cellular security uses." In their comments, Harris also offered additional wording to the proposed Section 15.121 which details their requested exemption. Uniden supports Harris in this endeavor and joins them in making this request.

6. The comments of Grove Enterprises, Inc. imply that the Commission has overstepped its authority by including frequency converters in the scope of this proceeding. It should be noted that frequency converters can be used with certain scanners in order to extend the coverage to include the cellular frequencies. Therefore, Uniden supports the wording in the NPRM that states that "[t]o allow such converters to be marketed would be inconsistent with the intent of the Act." Moreover, in our comments, we requested the Commission to require that frequency converters used with

scanners that tune in the 800 MHz to 900 MHz band be authorized under the provisions of certification rather than notification. The application for equipment authorization for certification contains more demonstrable exhibits than the simpler notification procedure.

CONCLUSION

7. Uniden reiterates its support of the Commission's proposal. As stated in its comments, the only exception to the NPRM as written is with the provisions for frequency converters as mentioned above as well as in our original comment.

Respectfully submitted

/signature/

James R. Haynes
Chief Engineer

UNIDEN AMERICA CORPORATION
Engineering Services Office
8707 North by Northeast Blvd.
Fishers, Indiana 46038

CERTIFICATE OF SERVICE

I, James R. Haynes, hereby certify that copies of the foregoing "Reply Comments" in Gen Docket No. 93-1 were mailed first-class, postage prepaid, to the following on this 5th day of March 1993.

/signature/

Robert S. Foosaner
Counsel for Fleet Call, Inc.
601 W. 13th Street, N.W.
Suite 1110 South
Washington, D.C. 20005

James J. Harrison, Jr.
Cellular Services Group, Inc
2212 Old Court Road
Baltimore, Maryland 21208

Daniel Bart, Esq.
GTE Service Corporation
1850 M. Street, N.W.
Suite 1200
Washington, D.C. 20036

James E. Arconati
1289 Schulte Hill
St. Louis, MO. 63083

William C. Wells

Wayne Watts, Esq.
Southwestern Bell Mobile Systems, Inc.
17330 Preston Road, Suite 100A
Dallas, Texas 75252

Michael F. Altschul, Esq.
Cellular Telecommunications
Industry Association
1133 21st Street, N.W.
Washington, D.C. 20036

Charles M. Wistar
PrivaFone
1122 Kenilworth Drive
Suite 217
Baltimore, Maryland 21204

Charles P. Featherstun
Counsel for BellSouth
1155 Peachtree St., N.W.
Suite 1800
Atlanta, GA 30367-6000

Bob Grove
P.O. Box 92
Brasstown, N.C. 28902

1312 W. Wabash Avenue
Logansport, IN 46947-4233

Jeffrey Krauss
17 West Jefferson St.
Suite 106
Rockville, MD 20850

Brian Morgan
9501 Bainbrook Court
Cincinnati, OH 45249

Richard J. Arsenault
Hopkins & Sutter
Counsel for Tandy Corp.
888 16th St., N.W.
Suite 700
Washington, D.C. 20006

Cpl. Frank Carson #1482
P.O. Box 526
Clinton, MD 20735

John I. Stewart, Jr.
Crowell & Moring
Counsel for Harris Corp.
1001 Pennsylvania Ave., N.W.
Washington, D.C. 20004

Standard Disclaimer- Any opinions, etc. are mine and NOT my employer's.

Bill Sohl (K2UNK) BELLCORE (Bell Communications Research, Inc.)
Morristown, NJ email via UUCP bcr!cc!whs70
201-829-2879 Weekdays email via Internet whs70@cc.bellcore.com

Date: 11 Mar 93 18:54:28 GMT

From: arizona.edu!zippy.telcom.arizona.edu!nauvax.ucc.nau.edu!cvm@arizona.edu
To: info-hams@ucsd.edu

References <1993Mar9.193108.4955@VFL.Paramax.COM>, <14570688@hpnmrla.sr.hp.com>, <1993Mar11.085354.23100@ke4zv.uucp>izon.e
Subject : Re: How do I ground the antenna?

In article <1993Mar11.085354.23100@ke4zv.uucp> gary@ke4zv.uucp (Gary Coffman)
writes:

>Grounding the coax shield does < half the job of protecting the shack.
>You're depending on the >2,000 volt flashover rating of the dielectric
>to ground the center conductor. Most radio equipment will die under these
>conditions. Use a proper suppressor.

I am wondering if I should put a suppressor in my setup. Please read on to help me decide.

.. stuff deleted ..

>to offer a solid alternative path to the lightning current. A number 8
>wire run directly from the antenna to ground, and a few turn coil of
>the coax at the top and bottom of the mast, will furnish a better
>alternative path for the current and reduce the chance of damaging
>currents entering the ham shack. Never make a wire that connects to
>your equipment the *best* path for lightning currents to travel.

>

>Gary

>

I have the classic "Copper Cactus" J-pole with a single run (ie. no splices) of RG-8 into my house. The J-pole is grounded by connecting the mount side of the antenna to an 8-foot copper clad grounding rod with a piece of very large copper stranded wire. This wire consists of about 10 strands of number 8 copper. My father-in-law is an electrician and had this laying around in his scrap. The feedline enters the house in the attic and is looped in about two 10-inch diameter circles on the radio side.

I only have the feedline connected when I am using the radio, which I don't do if the weather looks at all bad. The rest of the time the end of the coax is disconnected and placed inside an 8-inch long glass bottle to insulate it from arcing to any possible ground.

Am I correct to assume, that adding a suppressor would only give me additional protection when I am using the radio? Would you recommend putting a suppressor on this setup?

Chris Michels -- Systems Programmer cvm@nauvax.ucc.nau.edu
Northern Arizona University -- Flagstaff, AZ cvm@nauvax.bitnet
Phone: (602) 523-6495 N7YIU

End of Info-Hams Digest V93 #306
